

## REMARKS

The present response is intended to be fully responsive to all points of rejection raised by the Examiner in the Office Action dated August 14, 2006, and is believed to place the application in condition for allowance. Favorable reconsideration and allowance of the application is respectfully requested.

## CLAIM REJECTIONS

### 35 U.S.C. § 103(a) Rejections

Claims 12 – 15, 20 – 23, 42, 44, 46, and 48 have been rejected under 35 U.S.C. §103(a), as being unpatentable over Printezis, et al. (hereinafter “Printezis”). Applicants respectfully traverse this rejection in view of the remarks that follow.

Claim 12 recites, *inter alia*:

“a) tracing a root object to any of its reachable objects in a population of objects;...

f) tracing said referent object marked in step e) to any of its reachable objects;...

wherein either of steps a) and f) are performed for a given **object only if the card to which the object belongs is not marked...**” (emphasis added).

Thus, the recited feature limits tracing an object **only if the object is on an unmarked card** during concurrent operation of a mutator.

The Examiner asserts that these features, while “not explicitly disclosed” by Printezis, are otherwise “illustrated” by Fig. 1.

Applicants respectfully submit that Printezis does not illustrate the recited features. Indeed, **Fig. 1 actually shows an object in a dirty card being traced, which clearly teaches away from the recited features.** In step 1b page 3 is marked as dirty, and object g is not marked and not yet traced. At step 1c, which marks “the end of the concurrent marking phase” (Printezis, page 5), object g is marked and traced for references. This is clearly shown by its color at step 1c and understood by the very definition of finishing the concurrent marking phase. Thus, Printezis clearly shows an object that was traced when its card/page was dirty.

Applicants respectfully request, therefore, that the rejection of claim 12 under 35 U.S.C. § 103(a) be withdrawn.

Claims 13 – 15 depend directly or indirectly from independent claim 12, and are, *a fortiori*, deemed allowable. Applicants respectfully request, therefore, that the rejection of claims 13 – 15 under 35 U.S.C. § 103(a) be withdrawn.

Claim 20 as amended recites, *inter alia*:

“...at any time relative to performing any of steps a) – g), periodically determining whether a marked card contains at least one of said marked objects, and unmarking any marked card about which it is determined that it does not contain at least one of said marked objects...”

The Examiner asserts that Printezis marks as cleaned all the cards at the start of the concurrent tracing, before marking reachable objects. However, this is done irrespective of whether or not a card is marked, or whether or not a marked has any marked objects. In contradistinction to Printezis, the recited feature of claim 20 requires that a determination be made that a marked card contain no marked objects before it is unmarked, which feature Printezis neither teaches nor suggests. Applicants respectfully request, therefore, that the rejection of claim 20 under 35 U.S.C. § 103(a) be withdrawn.

Claims 21 – 23 depend directly or indirectly from independent claim 20, and are, *a fortiori*, deemed allowable. Applicants respectfully request, therefore, that the rejection of claims 21 – 23 under 35 U.S.C. § 103(a) be withdrawn.

Claim 42 sets forth the invention in claim 12 as a system, and is deemed allowable in view of the discussion above with regard to claim 12.

Claim 44 sets forth the invention in claim 20 as a system, and is deemed allowable in view of the discussion above with regard to claim 20.

Claim 46 has been amended to restate claim 12 in “Beauregard” format, and is deemed allowable in view of the discussion above with regard to claim 12.

Claim 48 has been amended to restate claim 20 in “Beauregard” format, and is deemed allowable in view of the discussion above with regard to claim 20.

Applicants respectfully request, therefore, that the rejection of claims 42, 44, 46, and 48 under 35 U.S.C. § 103(a) be withdrawn.

Claims 8, 10, 16 – 19, 24, 27, 29, 38, 40, 43, 45, 47, and 49 have been rejected under 35 U.S.C. §103(a), as being unpatentable over Printezis, et al. (hereinafter “Printezis”) in view of U.S. Publication No. 2001/0000821 to Kolodner, et al. (hereinafter “Kolodner”). Applicants respectfully traverse this rejection in view of the remarks that follow.

Claims 8 and 10 depend directly or indirectly from independent claim 20, and are, *a fortiori*, deemed allowable in view of the discussion above with regard to claim 20. Applicants respectfully request, therefore, that the rejection of claims 8 and 10 under 35 U.S.C. § 103(a) be withdrawn.

Claims 16 – 19 and 24 – 30 are cancelled herewith without prejudice or disclaimer.

Claims 38 and 40 depend directly or indirectly from independent claim 44, and are, *a fortiori*, deemed allowable in view of the discussion above with regard to claims 20 and 44. Applicants respectfully request, therefore, that the rejection of claims 38 and 40 under 35 U.S.C. § 103(a) be withdrawn.

Claims 43, 45, 47, and 49 are cancelled herewith without prejudice or disclaimer.

Claims 9, 11, 28, 30, 39, and 41 have been rejected under 35 U.S.C. §103(a), as being unpatentable over Printezis, et al. (hereinafter “Printezis”) in view of U.S. Publication No. 2001/0000821 to Kolodner, et al. and further in view of U.S. Patent No. 5,948,113 to Johnson, et al. (hereinafter “Johnson”). Applicants respectfully traverse this rejection in view of the remarks that follow.

Claims 9 and 11 depend directly or indirectly from independent claim 20, and are, *a fortiori*, deemed allowable in view of the discussion above with regard to claim 20. Applicants respectfully request, therefore, that the rejection of claims 9 and 11 under 35 U.S.C. § 103(a) be withdrawn.

Claims 28 and 30 are cancelled herewith without prejudice or disclaimer.

Claims 39 and 41 depend directly or indirectly from independent claim 44, and are, *a fortiori*, deemed allowable in view of the discussion above with regard to claim 20. Applicants respectfully request, therefore, that the rejection of claims 39 and 41 under 35 U.S.C. § 103(a) be withdrawn.

### **Conclusion**

Applicant respectfully submits that consideration of the above remarks renders the present application in condition for allowance, which action Applicant respectfully solicits.

Favorable action on this response is courteously solicited.

Please charge any fees associated with this paper to deposit account No. 09-0468.

Respectfully submitted,

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Date: November 13, 2006

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